

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE U.S. 40 (PULASKI HIGHWAY) AND GATEWAY DRIVE INTERSECTION IN HARFORD COUNTY. U.S. 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR PHASE FULL-TRAFFIC-ACTUATED MODE. THE EASTBOUND AND WESTBOUND U.S. 40 MOVEMENTS WILL RUN CONCURRENTLY. AN EXCLUSIVE LEFT TURN WILL BE PROVIDED FOR WESTBOUND U.S. 40. THE GATEWAY DRIVE APPROACH WILL OPERATE ALONE. A PEDESTRIAN PHASE WILL BE INCLUDED ON THE EAST LEG OF THE INTERSECTION.

THIS INTERSECTION WILL OPERATE AS PART OF AN INTERCONNECT SYSTEM BETWEEN MD 152 (MOUNTAIN ROAD) AND THE MD 24 RAMPS USING 12-PAIR COMMUNICATION CABLE. THE SYSTEM CABINET IS LOCATED AT WOODBRIDGE CENTER DRIVE.

CONTROLLER REQUIREMENTS

INSTALL A FULLY-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER WITH A VIDEO DETECTION SYSTEM, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, ISOLATION BOARD, TELEMETRY EQUIPMENT, FOUR CHANNEL LOOP DETECTOR AMPLIFIER AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT 410-787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND TELEPHONE NUMBER.

PROJECT CONTACTS

CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-321-2781 OR 410-321-2885

MS. SUENETTE POPE
UTILITY ENGINEER
410-321-2841

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-321-2764

CONTACT PERSONS FOR THE OFFICE OF TRAFFIC AND SAFETY ARE AS FOLLOWS:

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
410-787-7676

THE POWER COMPANY REPRESENTATIVE:

MR. GARY SMITH
BGE
410-859-9433

MR. MIKE STOCKER
SIGNAL SHOP WAREHOUSE
410-787-7696

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
971017	1 EA.	EIGHT PHASE (FULLY ACTUATED) CONTROLLED AND CABINET-BASE MOUNT NEMA SIZE SIX
963010	1 EA.	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT
900000	1 EA.	VIDEO INTERFACE EQUIPMENT FOR 1-4 CAMERAS
900000	23 S.F.	SHEET ALUMINUM SIGN
	- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (24"x51") - POLE MOUNT M3-2 (24" x 12") M1-4 (24" x 24") M6-1(R) (21" x 15")
	- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (36"x75") - POLE MOUNT M3-4 (30" x 15") M1-4 (36" x 36") M6-1(L) (30" x 24")
900000	22 S.F.	SHEET ALUMINUM SIGN
	- 2 EACH	D3-2 (16" x VAR.) - DUAL FACE - MAST ARM MOUNT

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
120500	L.S.	MAINTENANCE OF TRAFFIC
203030	7 C.Y.	TEST PIT EXCAVATION
585620	320 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS (CROSSWALK)
585624	145 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS (STOP LINE)
801004	18 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
802145	7 EA.	ADJUST EXISTING HANDHOLE
802501	650 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805125	130 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805135	155 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805140	125 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805115	140 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
805155	550 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
805160	30 L.F.	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
807202	1 EA.	METERED SERVICE PEDESTAL
810555	4 EA.	MICROLOOP PROBE, 1000 FOOT LEAD IN CABLE
811001	8 EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813015	45 S.F.	INSTALL OVERHEAD SIGN
816005	1 EA.	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816010	3 EA.	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816001	3 EA.	VIDEO DETECTION CAMERA
818004	2 EA.	10 FOOT BREAKAWAY PEDESTAL POLE
818010	1 EA.	14 FOOT BREAKAWAY PEDESTAL POLE
818036	1 EA.	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM
818052	2 EA.	STEEL POLE WITH A SINGLE 70 FOOT MAST ARM
831010	1 EA.	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCCELL
832017	100 L.F.	CABLE - 1 CONDUCTOR, NO. 4 AWG, TYPE USE, 600V
837001	6 EA.	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860272	24 EA.	12 INCH VEHICULAR SIGNAL HEAD SECTION
860278	2 EA.	12 INCH PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT
860282	6 EA.	12 INCH PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT
861105	450 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
861106	1,000 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G.)
861107	200 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
861108	1,300 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
861116	100 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G.)
862102	140 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
865001	2 EA.	PUSHBUTTON AND SIGN
866103	1 EA.	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
871117	1 EA.	INSTALL EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT
800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIALS AND EQUIPMENT

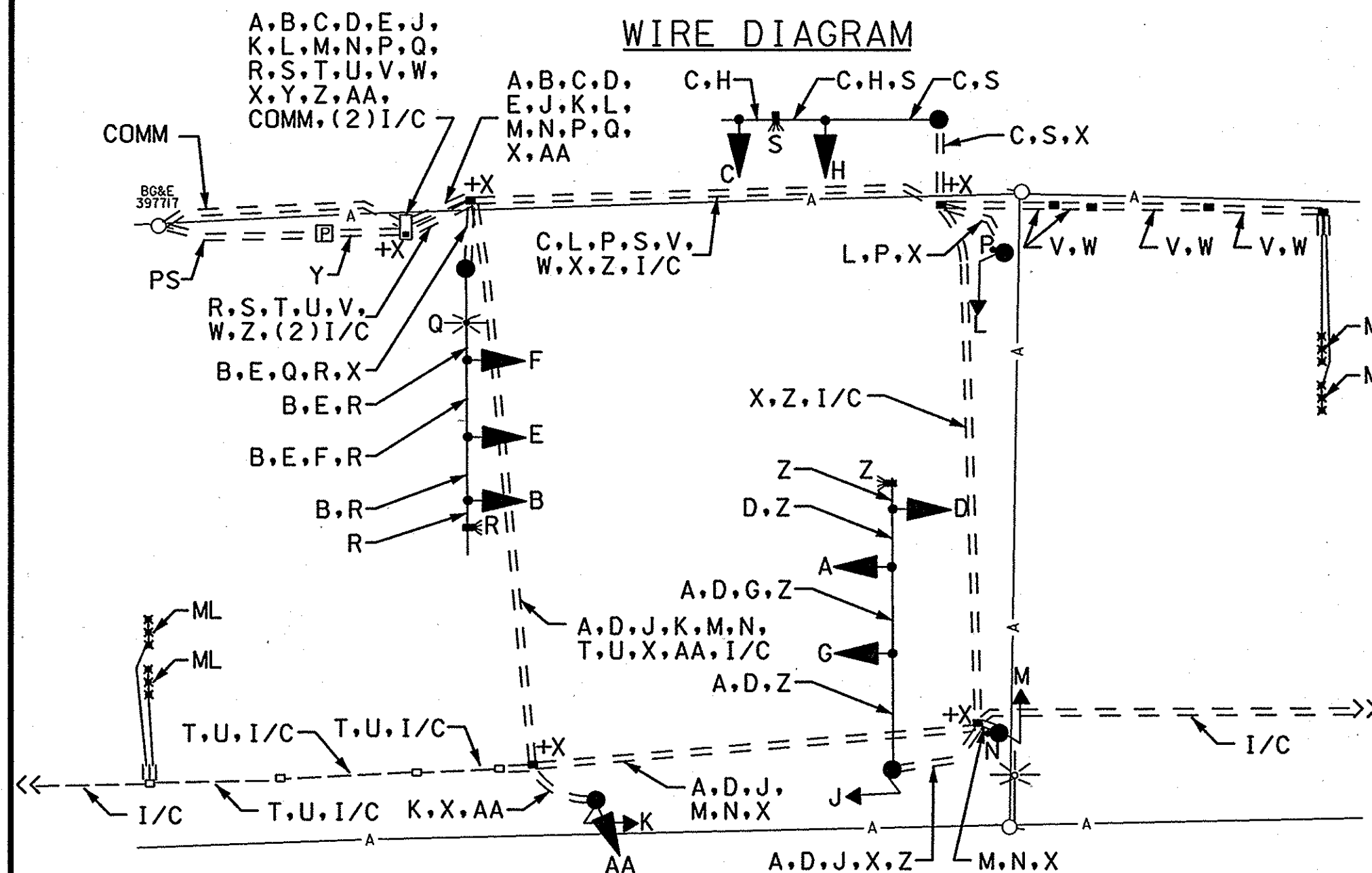
EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2+5	G	G	<G-	<G-	R	R	R	R	R	DW	DW	DW	DW
2+5 CHANGE	G	G	<Y-	<Y-	R	R	R	R	R	DW	DW	DW	DW
PHASE 2+6	G	G	<R-	<R-	R	R	R	R	R	WALK	WALK	DW	DW
PED CLEAR	G	G	<R-	<R-	G	G	R	R	R	FL/DW	FL/DW	DW	DW
2+6 CHANGE	Y	Y	<R-	<R-	Y	Y	R	R	R	DW	DW	DW	DW
PHASE 4	R	R	<R-	<R-	R	R	G	G	G	DW	DW	DW	DW
4 CHANGE	R	R	<R-	<R-	R	R	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	<R-	<R-	R	R	G	G	G	DW	DW	WALK	WALK
PED CLEAR	R	R	<R-	<R-	R	R	G	G	G	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	<R-	<R-	R	R	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK



NOTE: THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL UNUSED ELECTRICAL CABLES.

WIRING LEGEND

A,B,C,D,AA	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
E,F,G,H	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
J,K,L,M	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
N,P	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
Q	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
R,S,Z	VIDEO DETECTION CAMERA TO CONTROLLER CABLE
T,U,V,W	MICRO-LOOP PROBE LEAD-IN CABLE
X	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
Y	THREE RUNS OF 1-CONDUCTOR (NO. 4 A.W.G.)
+	3/4" x 10' GROUND ROD
ML	MICRO-LOOP PROBE SET
PS	PROPOSED POWER SERVICE UNDERGROUND
COMM	PROPOSED PHONE DROP
I/C	12-PAIR JELLY FILLED COMMUNICATIONS CABLE (NO. 19 A.W.G.) - UNDERGROUND (SEE INTERCONNECT PLANS)
Ⓜ	EMBEDDED METERED SERVICE PEDESTAL

SG-06

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SHA MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
U.S. 40 (PULASKI HIGHWAY) AT GATEWAY ROAD
EDGEWOOD, MARYLAND

GENERAL INFORMATION SHEET

DRAWN BY: S. HOLLIE	F.A.P. NO. HA2765171	SEE TITLE SHEET	TS NO. 1860-B-GI	SHEET NO.
CHECKED BY: D. EBY	S.H.A. NO.	COUNTY: HARFORD	T.I.M.S. NO. 6897	51 OF 100
SCALE: NONE	LOG MILE: 12004003.08			
DATE: MARCH 7, 2005				